

Appl. No. : 09/764,523
Filed : January 18, 2001

AMENDMENTS TO THE CLAIMS

Please delete Claims 33-38 and 41-45.

Please amend Claims 39 and 40 as set forth below.

Please add Claims 46-50 as set forth below.

1-38. (Canceled)

39. (Currently Amended) The method of Claim 38, A method of cleaning a chemical vapor deposition (CVD) reaction chamber with cleaning gas provided through a remote plasma discharge chamber, comprising:

dissociating cleaning gas within the remote plasma discharge chamber by applying energy with a power of less than about 3,000 W;

opening a valve on a piping after conducting a CVD reaction and prior to supplying activated species, wherein opening [[all]] the valve comprises withdrawing a sealing element completely from a path to form an opening substantially as wide as internal surfaces of the piping;

supplying activated species from the remote plasma discharge chamber to the reaction chamber through the piping; and

removing adhered deposits from CVD reactions on a wall of the reaction chamber at a rate of greater than or equal to about 2.0 microns/minute.

40. (Currently Amended) The method of Claim [[38]] 39, further comprising closing the valve after removing the adhered deposits.

41-45. (Canceled)

46. (New) The method of Claim 39, wherein the deposits on the reaction chamber wall comprise silicon nitride.

47. (New) The method of Claim 39, wherein the cleaning gas comprises fluorine-containing gas and the activated species comprises fluorine active species.

48. (New) The method of Claim 39, wherein the applied energy has a frequency between about 300 kHz and 500 kHz.

49. (New) The method of Claim 39, wherein supplying activated species comprises flowing NF₃ through the remote plasma discharge chamber at a rate between about 0.5 slm and 1.5 slm.

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50. (New) The method of Claim 39, wherein dissociating comprises applying energy with a power between about 2,000 W and 3,000 W.